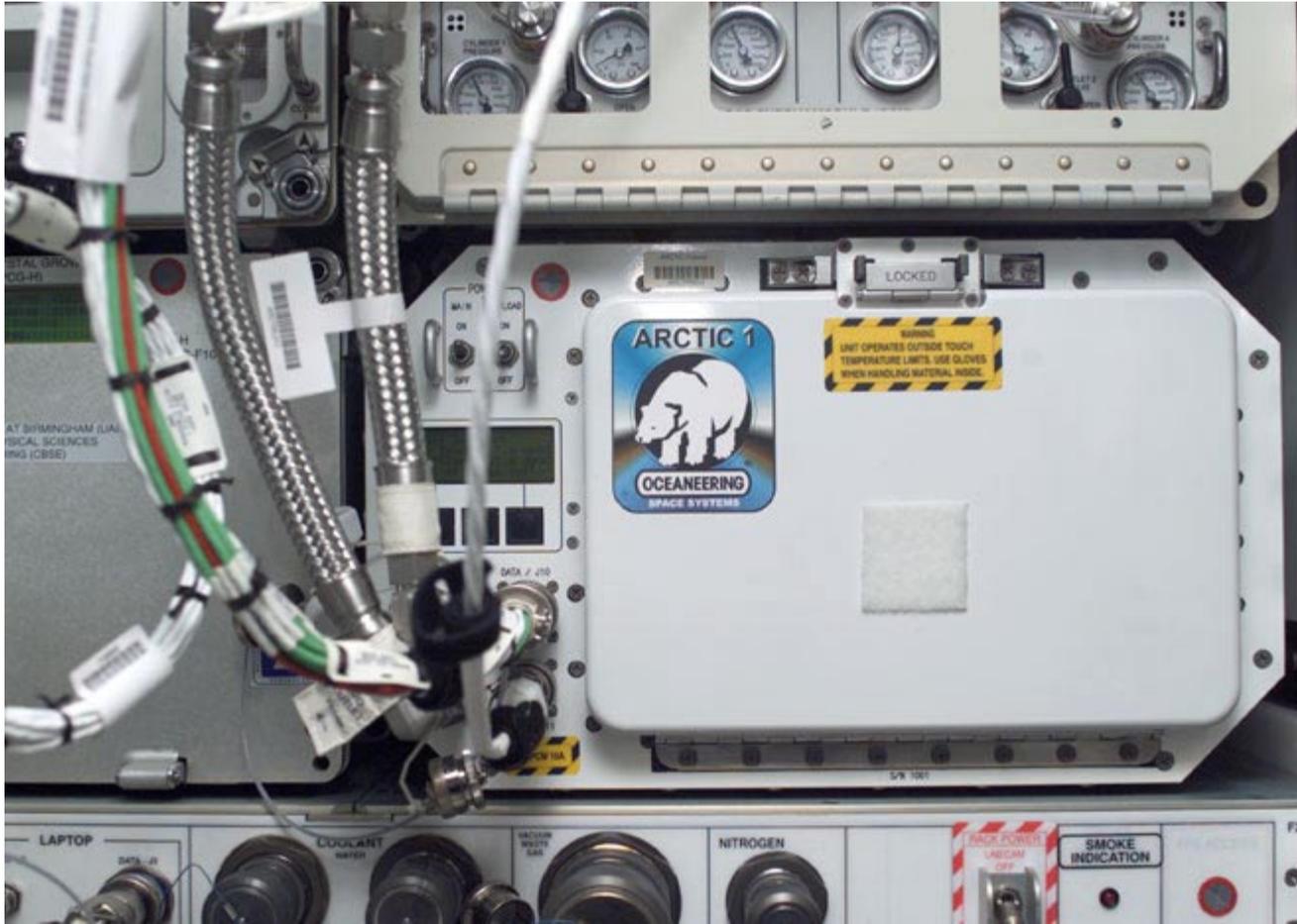


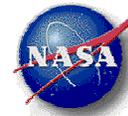
## Advanced Thermoelectric Refrigerator/Freezer/Incubator (ARCTIC) Qualify



ARCTIC freezer installed in EXPRESS Rack 4 following arrival on STS-110 (photographed April 17, 2002).



Microgravity Science Division



Glenn Research Center

PIMS ISS Acceleration Handbook  
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Data Description	
Sensor	
Location	
Inc/Flight	
Plot Type	

### Notes:

The Advanced Thermoelectric Refrigerator/Freezer/Incubator (ARCTIC) is used for storing biological samples in a thermally-controlled environment on the International Space Station before they are returned to Earth for scientific analyses. The ARCTIC can also be used for storing perishable items and reagents. The ARCTIC freezer is a thermolectric device that requires continuous and auxiliary power. It receives water and air cooling from the EXPRESS rack. ARCTIC 1 and 2 are scheduled to remain on Station and will only be powered up when needed. The crew will activate the freezers, insert and remove samples as needed, and perform weekly system health checks. Correspondence with hardware developers indicate that this thermolectric device has no moving parts, so that nominal operation does not introduce any acceleration disturbance. Examination of SAMS data during activation and deactivation times for the ARCTIC support this assertion.

Regime:	Vibratory
Category:	Experiment Equipment
Source:	Advanced Thermolectric Refrigerator/Freezer/Incubator (ARCTIC)